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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/537,717	12/06/2007	Gottfried Beer	075791.0232	5024
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BAKER BOTTS L.L.P. 2001 ROSS AVENUE SUITE 600 DALLAS, TX 75201-2980			EXAMINER PING, CHARLIE YU	
			ART UNIT 2883	PAPER NUMBER
			NOTIFICATION DATE 07/06/2009	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/537,717

**Applicant(s)**

BEER ET AL.

**Examiner**

CHARLIE PENG

**Art Unit**

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 21 is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-20 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 June 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- \_\_\_\_\_ Paper No(s)/Mail Date \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413)
- \_\_\_\_\_ Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's statement under 35 U.S.C. 103(c) with regard to the commonly assigned Althaus '882 reference is accepted. All previous obviousness-type rejections in view of the Althaus reference are withdrawn.
2. Applicant's arguments with respect to claim 1 and its dependent claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Objections***

3. Claim 1 is objected to because of the following informalities:

"the transmitter component" and "the receiver component" in lines 3 and 4 appears to refer back to "at least one transmitter component" and "at least one receiver component" in lines 2 and 3 and should be appropriately designated as "the at least one transmitter component" and "the at least one receiver component", or the like;

two light signals are disclosed: "light from the transmitter component" and "light being coupled out from the waveguide" in lines 9 and 11, the second instance of "light" should refer back to the first "light" or the two instances of "light" should be differently designated in the claimed invention;

"an planar 25 optical circuit" on line 16. Appropriate correction is required.

4. Claim 8 is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim (claims 8) cannot depend upon another multiple dependent claim (claim 7). See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "and/or" is inherently indefinite since it fails to clarify whether subject matters disclosed are to be taken in combination or in alternate.

7. Claim 1 recites the limitation "the transmitter and/or receiver assembly" in lines 5 and 6. There is insufficient antecedent basis for this limitation in the claim.

8. Claims 2-20 recite the limitation "the circuit arrangement" in line 1. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,611,635 to Yoshimura et al. in view of U.S. Patent 4,875,750 to Spaeth et al. Yoshimura teaches, as illustrated in Figs. 33-36, and 37-1 through 37-4, embodiments of an optoelectrical multichip-module substrates comprising at least one transmitter component 336, at least one receiver component 328, a planar optical circuit substrate 320 consisting of an integrated waveguide 324a, a light signal from the transmitter component 328 being coupled into the integrated waveguide and out from the integrate waveguide onto the light receiver component, the transmitter and receiver components being situated outside a plane in which the integrated waveguide is formed in the planar optical circuit substrate 320. Yoshimura further teaches, as illustrated in Figs. 1, 6, 21, 31, 32, and 32-1, multichip module systems wherein an optical fiber 3, 4, 5, 102, 103, 104, 105 is coupled at one end by a conventional V-groove connector to an optical waveguide and subsequently light emitters and receivers on the substrate.

Yoshimura does not teach a lens for coupling the optical fiber to the transmitter and receiver components arranged on the planar optical circuit substrate. Spaeth teaches mounting a spherical lens 1 in an inverted and truncated pyramid cutout 3 in an optoelectronic coupling element to a light emitting or light detecting semiconductor light transducer 6. It would have been obvious to one skilled in the art to modify Yoshimura's invention by using the cutout as suggested by Spaeth to mount the spherical lens 10 for that it allows the lens to be mounted very accurately at a precisely defined position.

12. With specific reference to claim 5, as seen in Fig. 3 of Spaeth, the lens is arranged at an end side on an end area where the optical fiber is disposed in a V-groove.

13. With specific reference to claims 6 and 18, using an index matching material in interfacial regions between optical components is a very well known technique in the art and would be quite obvious for one skilled in the art to practice in order to reduce losses in the interfacial regions.

14. With specific reference to claim 7, plano-convex lens is one of many known different types of simple lenses and without evidence of criticality or unexpected results, usage of what is known or old cannot be considered inventive. Further, Althaus appears to show using plano-convex lenses 6 for collimating light beam emitted by the laser diode 12 and focusing light beam into the photodiode 4 as illustrated in Fig. 1.

15. With specific reference to claim 19, mere duplication of essential working parts already disclosed without providing new and unexpected results involves only routine skill in the art. *In re Harza*, 124 USPQ 378.

16. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura et al. and Spaeth et al. as applied to claim 1 above and further in view of U.S. Patent 4,969,712 to Westwood et al. Yoshimura and Spaeth teach the optical module with mirrors for reflecting light signals but not wavelength selective mirrors. Using a dichroic mirror or filter at an end of a waveguide to select optical signals by wavelengths is known in the art and described by Westwood as illustrated in Fig. 2, reference numeral 290. It would have been obvious to one skilled in the art to modify Yoshimura and Spaeth's invention by including dichroic mirrors for one of many different purposes such as preventing transmission or creating an optical splitter.

17. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura et al. and Spaeth et al. as applied to claim 1 above and further in view of U.S. Patent 6,939,058 to Gurevich et al. Yoshimura and Spaeth teach the optical module with mirrors for reflecting light signals but not respective housings for the optical emitting and receiving components. Using a housing for optical components is well known in the art and described by Gurevich as illustrated in Fig. 2, reference numeral 22. It would have been obvious to one skilled in the art to modify Yoshimura and Spaeth's invention by including a housing for one of many different purposes such as protection of optical components or allow for easy alignment.

18. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshimura et al. and Spaeth et al. as applied to claim 1 above and further in view of DE 4422322 to ANT Nachrichtentechnik. Yoshimura and Spaeth teach the optical module having a housing for receiving an optical fiber but not a plug receptacle. Such designs are well known in the art and as discussed by the '322 reference, (Page 5, lines 6-23), and it would have been obvious to one skilled in the art to appropriately modify Yoshimura and Spaeth's invention in order to reduce coupling losses.

***Allowable Subject Matter***

19. Claims 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 21 is allowed. Both claims comprise previously indicated allowable subject matter.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLIE PENG whose telephone number is (571)272-2177. The examiner can normally be reached on 9 am - 6 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

06/29/2009

/CHARLIE PENG/  
Primary Examiner, Art Unit 2883